

## Amendment to the Claims:

This listing of claims will replace all prior listing of claims in this application.

### Listing of Claims:

#### CLAIMS

1. (Currently amended) A Method method of self-supported transfer of a thin film ~~according to which~~, the method comprising:

- preparing a source substrate ~~is prepared~~[[,]];
- implanting at least a first species of ions or gas ~~in~~ at a first dose ~~is implanted in that~~ a source substrate at a given specified depth with respect to a face of ~~that the~~ source substrate, wherein that the first species ~~being adapted to generate~~ generates defects[[,]];
- applying a stiffener ~~is applied~~ in intimate contact with the source substrate,
- applying a heat treatment ~~is applied to that the~~ source substrate, at a ~~given~~ specified temperature for a ~~given~~ specified time, so as to create, substantially at the given depth, a buried weakened zone, without initiating ~~the~~ a thermal splitting of the thin film[[,]]; and
- applying a pulse of energy ~~is applied to that the~~ source substrate so as to provoke ~~the~~ a self-supported splitting of ~~a the~~ thin film delimited between the face ~~of the~~ source substrate and the buried weakened layer, with respect to ~~the~~ a remainder of the source substrate.

2. (Currently amended) The Method method according to claim 1, ~~characterized in that the~~ wherein applying a pulse of energy is applied comprises applying the pulse to ~~a small part~~ only a portion of the buried weakened layer.

3. (Currently amended) The Method method according to claim 2, ~~characterized in that~~ wherein the pulse of energy ~~is applied in the form of~~ comprises a localized thermal provision.

4. (Currently amended) The Method method according to claim 2, ~~characterized in that the~~ wherein applying a pulse of energy is applied comprises applying the pulse in

the form of a single brief movement ~~that is brief and~~ of small amplitude ~~applied~~ by means of a tool.

5. (Currently amended) ~~The Method~~ method according to claim 2, ~~characterized in that wherein applying the pulse the localized provision of energy is applied~~ comprises in the form of a shock in shocking a peripheral zone of the buried weakened ~~layer~~ zone.

6. (Currently amended) ~~The Method~~ method according to claim 1, ~~characterized in that the wherein applying a pulse of energy comprises applying a controlled energy pulse is applied globally to the~~ source substrate.

7. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 6~~ claim 1, ~~characterized in that the wherein applying a pulse of energy comprises applying a pulse is applied at a temperature at most equal to of no more than~~ about 300°C.

8. (Currently amended) ~~The Method~~ method according to claim 7, ~~characterized in that wherein applying a pulse comprises applying the pulse is applied at room temperature~~.

9. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 8~~ claim 1, ~~characterized in that wherein applying a pulse of energy comprises conducting the a heat treatment is conducted so that the area opened up by the defects is from 25% to 32% of the total area of the weakened area in the substrate~~.

10. (Currently amended) ~~The Method~~ method according to claim 9, ~~characterized in that wherein applying a heat treatment comprises conducting the heat treatment is conducted so that the density of the defects is furthermore from 0.03 to 0.035 per square micron~~.

11. (Currently amended) ~~The Method~~ method according to claim 9 ~~or claim 10~~, ~~characterized in that wherein applying a heat treatment comprises conducting the heat treatment is conducted so that the size of the defects is furthermore of on the order of 7 to 8 square microns~~.

12. (Currently amended) ~~The Method~~ method according to ~~any one of claim 1 to 11,~~ characterized in that wherein ~~apply the stiffener with which the source substrate is placed in intimate contact,~~ comprises applying the stiffener at latest ~~at or before~~ the moment of applying the heat treatment, and wherein the stiffener comprises ~~is~~ a target substrate, the heat treatment contributing to improving the bonding energy between ~~these substrates~~ source substrate and the target substrate.

13. (Currently amended) ~~The Method~~ method according to claim 12, characterized in that wherein the target substrate ~~is of~~ comprises an amorphous material.

14. (Currently amended) ~~The Method~~ method according to claim 12, characterized in that wherein the source substrate ~~is of~~ comprises silicon and the target substrate ~~is of~~ comprises fused silica.

15. (Currently amended) ~~The Method~~ method according to claim 12, characterized in that wherein the target substrate ~~is of~~ comprises a monocrystalline or polycrystalline material.

16. (Currently amended) ~~The Method~~ method according to claim 15, characterized in that wherein the target substrate ~~is of~~ comprises silicon.

17. (Currently amended) ~~The Method~~ method according to ~~any one of claims claim 1 to 16,~~ characterized in that wherein the first species ~~is~~ comprises hydrogen.

18. (Currently amended) ~~The Method~~ method according to claim 17, characterized in that wherein the first species ~~is hydrogen of~~ comprises singly ionized hydrogen  $H^+$  type.

19. (Currently amended) ~~The Method~~ method according to claim 18, characterized in that wherein ~~implanting a the first species is implanted~~ comprises implanting at a dose of on the order of ~~a few at least about~~  $10^{16}$  H/cm<sup>2</sup>.

20. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 19~~ claim 1, characterized in that ~~there is further comprising implanted~~ implanting a

second species, ~~in~~ at a second dose, ~~this wherein the second species being adapted to occupy~~ occupies the defects generated by the first species.

21. (Currently amended) ~~The Method~~ method according to claim 20, ~~characterized in that, in the case of implanting two species, wherein the first and second species are implanted at differing implant depths, and wherein the deeper profile~~ implant is implanted first.

22. (Currently amended) ~~The Method~~ method according to claim 20 ~~or claim 21,~~ ~~characterized in that the~~ wherein implanting a second species second species is comprises implanting helium.

23. (Currently amended) ~~The Method~~ method according to claim 22, ~~characterized in that wherein implanting the second species is implanted~~ comprises implanting at a dose of ~~the order of few~~  $10^{16}$  He/cm<sup>2</sup>, less than the ~~dose of the first species~~ dose.

24. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 23~~ claim 1, ~~characterized in that the~~ wherein preparing a source substrate is prepared comprises preparing a substrate from a material chosen from comprising one of semiconductors and insulators, monocrystalline, polycrystalline or amorphous materials.

25. (Currently amended) ~~The Method~~ method according to claim 24, ~~characterized in that wherein the source substrate is prepared from a material chosen from the~~ comprises a group IV semiconductors semiconductor.

26. (Currently amended) ~~The Method~~ method according to claim 25, ~~characterized in that wherein the source substrate is made from~~ comprises silicon.

27. (Currently amended) ~~The Method~~ method according to claim 24, ~~characterized in that wherein the source substrate is made of~~ comprises germanium.

28. (Currently amended) ~~The Method~~ method according to claim 24, ~~characterized in that wherein the source substrate is made of AsGa~~ comprises GaAs.

29. (Currently amended) ~~The Method~~ method according to ~~any one of claims 1 to 28~~ claim 1, ~~characterized in that the~~ wherein applying a pulse of energy comprises performing a heat treatment ~~is performed~~ at a temperature ~~chosen in the range of~~ 200°C[[-]] to 400°C.

30. (Currently amended) ~~The Method~~ method according to claim 29, ~~characterized in that~~ wherein the heat treatment is performed at a temperature ~~chosen in the range of~~ 300°C[[-]] to 350°C.

31. (Currently amended) ~~The Method~~ method according to claim 29 ~~or claim 30~~, ~~characterized in that~~ wherein the heat treatment is ~~conducted~~ performed for approximately 2 hours to 5 hours.

32. (Currently amended) ~~The Method~~ method according to claim 24 ~~characterized in that the source substrate is prepared from~~ comprises a type III-V semiconductor material ~~of type III-V~~.

33. (Currently amended) ~~The Method~~ method according to claim 32, ~~characterized in that~~ wherein the source substrate ~~is prepared from~~ comprises an insulator ~~chosen~~ selected from the group consisting of  $\text{LiNbO}_3$  and  $\text{LiTaO}_3$ .